

Amendments to the Claims

Claims 1-29 (Cancelled)

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30. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the heat resistance of the active adhesive layer area is less than 5 K x mm²/W.
31. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the active adhesive layer area is at least that area of the adhesive layer bordering on a volume area of a radiation field of the solid-state body having a pumping power density of the pumping light radiation field of at least approximately 80% of the maximum value present in it.
32. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the active adhesive layer area is at least that area of the adhesive layer bordering on the volume area of the solid-state body penetrated by the a pumping light radiation field from the radiation source.
33. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the active adhesive layer area is at least that area of the adhesive layer bordering on the a volume area of the solid-state body penetrated by at least two intersecting pumping light radiation fields.

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34. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer has a tensile strength of more than 1 N/mm².
35. (Previously added) A laser amplifying system as defined in claim 34, wherein the adhesive layer has a tensile strength of more than 5 N/mm².
36. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer has a shearing strength of more than 5 N/mm².
37. (Previously added) A laser amplifying system as defined in claim 36, wherein the adhesive layer has a shearing strength of more than 25 N/mm².
38. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer is essentially thermally invariant in shape in the solid, cross-linked state.
39. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive is a two-component adhesive.
40. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive passes from the liquid state into the solid, cross-linked state without any transfer of substances.

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41. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive is ~~an adhesive hardening by way of a supply of energy by means of adapted to harden when exposed to radiation.~~
42. (Previously added) A laser amplifying system as defined in claim 41, wherein the adhesive is hardened by way of radiation with light.
43. (Previously added) A laser amplifying system as defined in claim 42, wherein the adhesive is hardened by way of radiation with UV light.
44. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive has a viscosity of less than 1000 mPa x s in the non-cross-linked state.
45. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer is free from filler material.
46. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer has a filler material.
47. (Previously added) A laser amplifying system as defined in claim 46, wherein the filler material has nanoparticles.

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48. (Previously added) A laser amplifying system as defined in claim 46, wherein the filler material has filler bodies with a size in the micrometer range.
49. (Previously added) A laser amplifying system as defined in claim 48, wherein the filler material has filler bodies consisting of one or more of the substances boron nitride, diamond, silver, copper and/or gold.
50. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer area bordering on the active volume area has a thickness of less than 5 μm .
51. (Previously added) A laser amplifying system as defined in claim 50, wherein ~~the a portion of the~~ adhesive layer area bordering on ~~the an~~ active volume area has a thickness of less than 2 μm .
52. (Previously added) A laser amplifying system as defined in claim 46, wherein ~~the a portion of the~~ adhesive layer area bordering on ~~the an~~ active volume area has a thickness of less than 50 μm .
53. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer is optically transparent.

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54. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer has an essentially constant thickness.

55. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the adhesive layer has an increasing thickness in a radial direction in relation to a center of ~~the~~ an active volume area starting from a central adhesive layer area bordering on said center.

56. (Currently amended) A laser amplifying system as defined in claim 29 57, wherein the course of the thickness of the adhesive layer is essentially radially symmetric to ~~the~~ a center of ~~the~~ an active volume area.

57. (New) A laser amplifying system comprising:

a plate-like solid-state body comprising a laser active medium, said solid state body having two oppositely located flat sides;

a radiation source for optically pumping said laser active medium to generate an amplified radiation field for output from said solid-state body;

a cooling member with a support surface for said solid-state body;

a first one of said flat sides of said solid-state body being mechanically and thermally coupled to said support surface via an adhesive layer that comprises a cross-linked adhesive material;

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said adhesive material being of a type that is essentially invariant in volume when changing from a liquid state into a solid, cross-linked state; and the adhesive layer having an active adhesive layer area with a heat resistance of less than $10 \text{ K} \times \text{mm}^2/\text{W}$.
